

AMENDMENT

In the Claims:

Please amend Claims 1, 4, 9, 18, 20-22 as follows (the changes in these Claims are shown with ~~striketrough~~ for deleted matter and underlines for added matter). A complete listing of the claims are listed below with proper claim identifiers.

1. (Currently amended) A buoyancy-driven power generation system comprising:
 - a plurality of magnet capsules;
 - a containment loop, said loop comprising a buoyancy section and a gravitational section;
 - said buoyancy section comprising a lower elevation portion and an upper elevation portion, wherein said buoyancy section is filled with liquid;
 - said gravitational section comprising a capsule holding section and a slide-and-fall section;
 - a capsule injector operative to receive a magnet capsule from said slide-and-fall section and introduce said magnet capsule into said buoyancy section; and
 - a coil configured to allow passage of said magnet capsules therethrough;whereby movement of said magnet capsule through said coil generates electric power.
2. (Original) The buoyancy-driven power generation system of claim 1 wherein said capsule injector comprises a first gate and a second gate.
3. (Original) The buoyancy-driven power generation system of claim 1 wherein said capsule injector comprises a first chamber, first ball valve, second chamber, and a second ball valve.
4. (Currently amended) A method of generating electric power, said method comprising:
 - introducing a magnet capsule into a first portion of a containment loop;
 - allowing said magnet capsule to move within said first portion due to buoyancy force; and

inducing electric power through the movement of said magnet capsule through said first portion;

wherein said first portion is filled with liquid.

5. (Cancelled)

6. (Original) The method of generating electric power of claim 4, further comprising the act of placing said magnet capsule in a capsule injector.

7. (Original) The method of generating electric power of claim 4 wherein said capsule is moved through at least a second portion of said loop via gravity.

8. (Original) The method of generating electric power of claim 7 wherein said magnet capsule is pushed via the collective weight of a plurality of magnet capsules.

9. (Currently amended) A method of generating electric power, said method comprising:

providing an elongated tube, ~~at least one portion of said tube containing fluid~~ said elongated tube comprising a liquid filled portion and a non-liquid filled portion;

providing at least one coil module proximate to ~~at least one portion~~ segment of said tube;

introducing a magnet capsule to said liquid~~fluid~~ filled portion;

allowing said magnet capsule to move through said liquid~~fluid~~ filled portion due to buoyancy force; and

inducing electric power through the movement of said magnet capsule proximate said coil module in proximity to said ~~a non-filled portion of pipe.~~

10. (Original) An apparatus for generating electric power using buoyancy, said apparatus comprising:

a containment loop;

a liquid filled portion of said loop having a lower elevation portion and a higher elevation portion;

a plurality of coil modules surrounding said liquid filled portion; and

a plurality of buoyant magnet capsules operative to move from said lower elevation portion to said higher elevation portion.

11. (Original) The apparatus for generating electric power of claim 10, further comprising a substantially non-filled portion of said loop connected with said liquid filled portion of pipe.

12. (Original) The apparatus for generating electric power of claim 11 wherein said non-liquid filled portion is connected with said higher elevation portion.

13. (Original) The apparatus for generating electric power of claim 10, further comprising a capsule injector connected with said lower elevation portion.

14. (Original) The apparatus for generating electric power of claim 10, further comprising a refill pipe connected with said liquid filled portion.

15. (Non-elected claim) A capsule injector for a buoyancy driven system for generating electric power, comprising:

an enclosed area having a first gate and a second gate, said area operable to fully contain a magnet capsule;

said first gate having an elevation lower than said second gate and being operative to receive a capsule from a waiting area containing at least one capsule;

said second gate having an elevation higher than said second gate and being operative to allow liquid to enter said enclosed area;

16. (Non-elected claim) A capsule injector for a buoyancy driven system for generating electric power, comprising:

a first chamber containing liquid and a first ball;

a second chamber containing liquid and a second ball; and

an electric valve for transferring fluid between said first chamber and said second chamber.

17. (Non-elected claim) A magnet capsule for use in a buoyancy driven system, comprising:

a magnet;
a low density material surrounding said magnet; and
a casing surrounding said magnet and low density material;
wherein said magnet capsule is buoyant in a liquid filled space.

18. (Currently amended) A method of generating electric power, said method comprising:

providing at least one buoyant magnetic capsule and at least one coil;
introducing said capsule into a lower portion of a ~~fluid~~liquid-filled area;
allowing said magnetic capsule to rise through said ~~fluid~~liquid; and
directing said capsule proximate said coil to induce current flow in said coil.

19. (Original) The method of claim 18 further comprising the act of returning said capsule to a lower portion via gravity.

20. (Currently amended) The method of claim 19 further comprising the act of providing a first flowpath for said capsule through said ~~fluid~~liquid and proximate said coil.

21. (Currently amended) The method of claim 20 wherein said flowpath further comprises a tubular member at least partially filled with a ~~fluid~~liquid.

22. (Currently amended) The method of claim 21 further comprising the act of providing a second flowpath for said capsule to said lower portion of said ~~fluid~~liquid-filled area.

23. (Original) The method of claim 22 wherein said first and second flowpaths are connected together to form a continuous loop.

REMARKS

In the Official Action of June 13, 2003, the Examiner allowed claims 10 -14, objected to claims 2 – 4, and rejected claims 1, 4 – 9 and 18 – 23.

Claim 1 has been amended to clarify that a portion of the tube is filled with liquid. Similar amendments have been made in claims 4, 9, 18, 20, 21 and 22.

Although the Official Action indicates that claim 21 was rejected pursuant to 35 U.S.C. § 112, it appears that claim 22 was intended. Claims 9 and 22 have been amended in response to the Examiner's request for clarification. In claim 9, the term "segment" has been used to clarify that the coil modules may be placed proximate to any part of the tube.

Applicant respectfully submits that all of the pending claims are in condition for allowance and seeks early allowance thereof. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (312) 321-4215.

Respectfully submitted,



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